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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,644	02/25/2002	Hitoshi Fujimatsu	P22020	6386

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EXAMINER	
PARSONS, THOMAS H	
ART UNIT	**PAPER NUMBER**
1745	

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/049,644	FUJIMATSU ET AL.	
	Examiner	Art Unit	
	Thomas H Parsons	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8-19* is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 30 June 2000. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 11 May 2001. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

Claim Objections

3. Claims 1-5 and 8-14 objected to because of the following informalities:

In each of the claims, suggest deleting the reference signs and parenthesis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimatsu et al. (6,635,385)

The applied reference has a common inventor(s) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim 1: Fujimatsu et al. disclose in Figure 1 a method for manufacturing a battery electrode plate, comprising the steps of: mixing a solvent (13) with a polyolefin resin (11) (Figure 1A); preparing a gel-like solution (17) that is a gelled solution as a whole having a high viscosity by heating the mixture of the polyolefin resin and the solvent at a temperature at which a part or the whole of the polyolefin resin melts (Figure 1B); forming an insulation layer (20) by coating the gel-like solution on a surface of a positive electrode plate (8) or negative electrode plate (Figure 1G) and drying the insulation layer by heating the positive electrode plate or negative electrode plate formed with the insulation layer (Figure 1H) (col. 3: 36-col. 4: 38).

The Examiner has construed the collect 8 as shown in Figure 1G as a positive electrode plate; and the powdered positive electrode mixture including the gel-like solution as an insulating layer. Further, the transitional phrase "comprising" has been construed an open ended phrase that does not exclude other press steps (i.e. the mixing step of Figures 1E and 1F).

Claim 2: Fujimatsu et al. in Figure 1 disclose that the gel-like solution (17) is rapidly cooled (Figure 1D), and after that it is coated on the positive electrode plate or negative electrode plate (8)(Figure 1G) so that the electrode plate (8) and the insulation layer (20) are unitized. (col. 3: 36-col. 4: 38).

Claim 3: Fujimatsu et al. disclose that a heating temperature in the drying step is set at a temperature equal to or above a boiling point of the solvent (13) in the gel-like solution (17), and at the same time, equal to or below a melting point of the polyolefin resin (11) (col. 3: 13-15).

Claim 4: Fujimatsu et al. disclose that polyethylene (11) is used as the insulation layer (20), the polyethylene is mixed with the solvent (13), and the mixture (17) is heated up to a temperature at which the polyethylene is thoroughly uniformly dissolved so as to prepare the gel-like solution (17). (col. 2: 64-col. 3: 2)

Claim 5: Fujimatsu et al. disclose that polyethylene (11) used as the insulation layer (20) is fibrous. (col. 25-31)

Claim 6: Fujimatsu et al. in Figure 1G disclose a battery electrode plate prepared by the manufacturing method according the method as set forth above in claim 1. (col. 3: 36-col. 4: 38).

Claim 7: Fujimatsu et al. disclose a nonaqueous-electrolyte rechargeable battery provided with the battery electrode plate according to claim 6. (col. 1: 16-18; col. 5: 37-40; and col. 7: 15-18).

Allowable Subject Matter

6. Claims 8-19 are allowable over the prior art of record.

Reasons for Indicating Allowable Subject Matter

7. The following is a statement of reasons for the indication of allowable subject matter:

As disclosed on col. 7: lines 15-27, the Fujimatsu et al. method solves the problems encountered in the past of high cost, decreased shelf life, and reduced cycling life when a fluorine-based resin powder is used preparing a gel-like solution using a polyolefin resin powder. Accordingly, there is not teaching or suggestion of adding a fluororesin or imide resin to the polyolefin resin in the method of producing the electrode plates.

Therefore, a search of the prior art of record failed to reveal or teach what is instantly claimed: in particular,

A method for manufacturing a battery electrode plate comprising the steps of: mixing a polyolefin resin with a solvent; preparing a gel-like solution that is a gelled solution as a whole having a high viscosity by heating the mixture to a temperature at which a part or the whole of the polyolefin resin melts; adding a fluororesin and/or an imide resin to the polyolefin resin at any stage from the state where the polyolefin resin exists alone to the state of the gel-like solution; coating the gel-like solution on a surface of a positive electrode plate or negative electrode plate; and drying the gel-like solution to form the solution into an insulation layer of the positive electrode plate or negative electrode plate by heating the positive electrode plate or negative electrode plate coated with the gel-like solution, a battery electrode plate prepared by the same, and a nonaquaous-electrolyte rechargeable battery provided with the battery electrode plate.

For this reason, claim 8 and claims 9-17 which are dependent thereon, claim 18, and claim 19 are patentably distinct from the prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas H Parsons
Examiner
Art Unit 1745

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Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700